Personal Details

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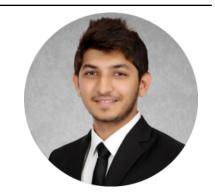
E-Mail: rajit.msanghvi@gmail.com

Birth Date: 01. June. 1995

Nationality: Indian Family Status: Single

<u>GitHub:</u> https://github.com/sanghvirajit

<u>Portfolio:</u> https://sanghvirajit19.github.io/Portfolio/



Research/ Work experience

10/2020 - current

Research Associate, Institute of Mathematics and Computer Science

Universität Koblenz-Landau, Koblenz, Germany.

- Successfully researched and developed C++ code to perform the PDE constrained optimization problem using multigrid methods.
- Generated the **neural networks** from scratch in **Python** to understand the vanishing gradient problems.
- Ongoing research to develop the code to solve PDE constrained optimization problem as
 a machine learning problem using Automatic differentiation and SciPy optimization
 python library.

09/2021 - current

Student Trainee, Machine Learning Bootcamp

DataTalks.Club, Berlin

- O Preparing the data and doing EDA, analyzing important features.
- Developed Customer churn prediction model using machine learning algorithm regression, and deployed the models on the AWS cloud service by creating Docker containers and using AWS Elastic Beanstalk.
- Developed Credit risk analysis model with Decision Tree, XGboost, and random forest, and deployed the models on the AWS cloud service by creating Docker containers and using AWS Elastic Beanstalk.

Projects

03/2021 - current

Technical writer and contributor

Neptune.ai and Medium

O I write about Data science, machine learning and deep learning.

Neptune.ai Blogs Medium Blogs

05/2020 - 09/2020

Internship, Research and Development

Simerics GmbH, Rottenburg am Neckar, Germany.

- O Developed Python library for mixed timescale coupling using Python packages like NumPy, Pandas, Matplotlib, and Seaborn.
- Successfully Implemented numerical Fluid-Structure Interaction (FSI) coupling algorithms for FSI coupling adapters in Python and improved the overall Simulation time by 10%.

05/2019 - 11/2019

Master's thesis, Department of Internal Combustion Engine Simulation.

IAV GmbH, Chemnitz, Germany.

- O Developed and executed the model method succefully to investigate the Turbine Downstream to increase the turbine pressure ratio and thus the turbine performance.
- Effectively and efficiently performed meshing, and 3D- CFD simulations of the models using CFD-tool StarCCM+.

10/2018 - 03/2019 Internship, Industrial Hydraulics Department.

Bosch Rexroth AG, Lohr am main, Germany.

Optimized the shape of hydraulic valves and pumps, and decreased the pressure drop by
 18% using the adjoint shape optimization method with CFD simulation.

09/2016 - 09/2017 Design Engineer, Hydraulic Control Department.

Bosch Rexroth (India) Pvt Ltd.

- Trained to design and test industrial hydraulic valves.
- Created 2D/3D technical drawings with CAD programs.

Education

10/2017 - 09/2020 M.Sc. Computational Engineering

Ruhr-Universität Bochum, Germany

Abschlussnote: 1.6

06/2012 - 03/2016 Bachelor of Technology in Mechanical Engineering

Indus Universität, India Abschlussnote: 9.22/10

IT/ EDV Knowledge

Programs: MS Word, MS Excel, MS Power Point – very good.

- O Machine Learning Frameworks: Keras, TensorFlow, PyTorch, und Scikit-Learn good.
- O Programming Languages: Python Very good, C++ Very good, SQL good, and Matlab good.
- o Linear Algebra und Visualization: Python-Library Numpy, Pandas, Matplotlib, Seaborn very good.
- Web-based Visualization: Interactive Dashboard with Plotly Python, und Dash good.
- O Statistics: Python, SPSS good.
- O Data-based management: RDBMS PostgreSQL good.
- Software/Tools: Docker good
- O Cloud services: AWS Elastic Beanstalk good
- O Data accumulation und Visualization: Web-Scraping with Beautiful Soup good.
- Operating systems: Window, Linux very good.

Languages

- German B1, Fluent in speaking and writing.
- English Mother tongue.

Certifications

Oct 2021 IBM certified Data Science Professional

Capstone Project

May 2021 The Complete SQL BootCamp 2021 – Udemy

Volunteering Experience

02/2018 - 03/2019 Vice President, Student Council

Ruhr-Universität Bochum, Germany

Awards

2017 Gold Medal

Indus Universität, India

Awarded for academic excellence in the bachelor's degree program.

Koblenz, 10/2021

